

WHAT IS CLAIMED IS:

1. A system for assisting running management of a plurality of carrier vehicles which carry predetermined material goods to a predetermined destination,

5 position information acquiring means mounted on said carrier vehicle, for acquiring one's own vehicle position information on the basis of a GPS signal;

time information acquiring means mounted on said carrier vehicle, for acquiring time information corresponding to said position information;

10 vehicle specifying information storing means mounted on said carrier vehicle, for storing vehicle specifying information used to specify one's own vehicle;

vehicle specifying information acquiring means mounted on said carrier vehicle, for acquiring the vehicle specifying information from said vehicle specifying storing means;

loadage measuring means for measuring loadage of the material goods loaded on the carrier vehicle on the basis of load detected by a load sensor attached to a predetermined position of said carrier vehicle;

20 transmitting means mounted on said carrier vehicle, for transmitting said position information, time information, vehicle specifying information and loadage to a business place through a communication network inclusive of a wireless line;

25 receiving means installed on said business place to which the carrier vehicle belongs, for receiving said position

information, time information, vehicle specifying information and loadage through said communication network; and

outputting means installed on said business place, for outputting said position information, time information,  
5 vehicle specifying information and loadage.

2. A system according to claim 1, wherein said carrier vehicle is a tank lorry vehicle for carrying liquefied gas produced at a liquefied gas producing base to a predetermined user.

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3. A system according to claim 2, further comprising delivery quantity computing means mounted on said tank lorry vehicle, for computing a delivery quantity of said liquefied gas to said user on the basis of said load, wherein  
15 said transmitting means and said receiving means transmits and receives said delivery quantity, respectively, and said outputting means outputs said delivery quantity.

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4. A system according to claim 3, wherein said outputting means further outputs a loss quantity of said liquefied gas lost during carrying of the liquefied gas by said tank lorry vehicle.

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5. A system according to any one of claims 2 to 4, further comprising:

delivery statement issuing means mounted on said tank

lorry vehicle, for issuing a delivery statement for a user supplied with said liquefied gas on the basis of said delivery quantity.

5        6.        A system according to claim 3, further comprising:  
             running history information saving means installed on  
             said business place, for saving, as running history  
             information, said position information, time information,  
             vehicle specifying information, loadage and delivery quantity,  
10        and

             bill issuing means installed on said business place, for  
             creating/issuing a bill for said user supplied with the liquefied  
             gas on the basis of said running history information.

15        7.        A system according to claim 3, further comprising:  
             running history information saving means installed on  
             said business place, for saving, as running history  
             information, said position information, time information,  
             vehicle specifying information, loadage and delivery quantity,  
20        and

             report issuing means installed on said business place,  
             for creating/issuing a bill for said user supplied with the  
             liquefied gas on the basis of said running history information.

25        8.        A system according to claim 6, wherein  
             said outputting means outputs said running history

information superposed on a map image of a related district.

9. A system according to claim 2, further comprising:

5 remaining level measuring means attached to a tank installed on the user's side, for measuring the remaining level of the liquefied gas in the tank;

remaining level warning information creating means attached to said tank, for creating remaining level warning information indicative of that said remaining level has become  
10 lower than a prescribed warning level;

tank position information acquiring means attached to said tank, for acquiring tank position information of one's own tank on the basis of the GPS signal;

15 warning time information acquiring means attached to said tank, for acquiring warning time information which is a time when said remaining level warning information is created;

tank specifying information storing means attached to said tank, for specifying tank specifying information used to specify one's own tank;

20 tank specifying information acquiring means attached to said tank, for acquiring the tank specifying information from said tank specifying information storing means; and

25 tank-side transmitting means attached to said tank, for transmitting said tank position information, warning time information, tank specifying information and remaining level warning information, wherein

said receiving means further receives said tank position information, warning time information, tank specifying information and remaining level information through said communication network, and

5           said outputting means further receives items of said tank position information, warning time information, tank specifying information and remaining level information through said communication network.

10       10.   A system according to claim 9, wherein

          said items of information transmitted from said transmitting means and said tank-side transmitting means are saved in a server of an application service provider communicated with said transmitting means and said tank-side transmitting means through a portable telephone packet communication network in a data quantity accounting system as said wireless communication network; and

          said receiving means installed on said business place receives said items of information saved in said server using  
20   an internet.

11.   A communication terminal device installed on a carrier vehicle for providing a predetermined item of information on running of said carrier vehicle to a business place to which  
25   a plurality of carrier vehicles for carrying a predetermined material good to a predetermined destination belong,

comprising:

position information acquiring means for acquiring one's own position information on a GPS signal;

5 time information acquiring means for acquiring time information corresponding to said position information;

vehicle specifying information storing means for storing vehicle specifying information used to specify one's own vehicle;

10 vehicle specifying information acquiring means for acquiring said vehicle specifying information from said vehicle specifying information storing means;

15 loadage measuring means for measuring loadage of the material good carried on one's own vehicle on the basis of a load detected by a load sensor attached to a predetermined position of one's own vehicle;

20 transmitting means mounted on said carrier vehicle, for transmitting said position information, time information, warning time information, vehicle specifying information and loadage to said business place through a predetermined communication network including a wireless line.

12. A communication terminal device attached to a tank installed on a side of a predetermined user for providing predetermined information on said tank to a business place to which a tank lorry vehicle carries and supplies liquefied gas to the user belongs, comprising:

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tank position information acquiring means for acquiring tank position information of the user's own tank on the basis of a GPS signal in response to remaining level warning information indicative of shortage of the liquefied gas in said tank;

warning time information acquiring means for acquiring warning time information which is a time when said remaining level warning information;

tank specifying information storing means for storing tank specifying information which specifies the user's own tank;

tank specifying information acquiring means attached to said tank, for acquiring said tank specifying information from said tank specifying information storing means;

tank-side transmitting means for transmitting said tank position information, warning time information, tank specifying information and remaining level warning information to said business place through a predetermined communication network including a wireless line.

13. A system for assisting running management of a plurality of carrier vehicles which carry predetermined material goods to a predetermined destination,

position information acquiring means mounted on said carrier vehicle, for acquiring one's own vehicle on the basis of a GPS signal;

time information acquiring means mounted on said carrier

vehicle, for acquiring time information corresponding to said position information;

vehicle specifying information storing means mounted on said carrier vehicle, for storing vehicle specifying information used to specify one's own vehicle;

vehicle specifying information acquiring means mounted on said carrier vehicle, for acquiring the vehicle specifying information from said vehicle specifying storing means;

loadage measuring means for measuring loadage of the material goods loaded on the carrier vehicle on the basis of load detected by a load sensor attached to a predetermined position of said carrier vehicle;

transmitting means mounted on said carrier vehicle, for transmitting said position information, time information, vehicle specifying information and loadage to a business place through a communication network inclusive of a wireless line;

running information collecting/recording means mounted on said carrier vehicle, for collecting running information of one's own vehicle whose recording is at least legally compelled and for recording the running information in correlation with said loadage on a portable recording medium;

receiving means installed on said business place to which the carrier vehicle belongs, for receiving said position information, time information, vehicle specifying information and loadage through said communication network;

outputting means installed on said business place, for

outputting said position information, time information,  
vehicle specifying information and loadage;

running information reading means installed on said  
businessplace, for reading said running information and loadage  
5 from said portable recording medium; and

report issuing means for creating/issuing a report  
correlated with said running information and said loadage.

14. A system according to claim 13, wherein

10 said running information collecting means is a tachograph,  
and

said portable recording medium is a memory card having  
a security function.

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